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### ABSTRACT

The definition of instructional technology used in this bibliography is based on the definition used by the report of the Commission on Instructional Technology, "To Improve Learning." Instructional Technology in this sense is not confined to the use of specific media, but also includes systematic approaches to the use of human and non-human resources to bring about more effective instruction. The material cited includes books, articles, monographs, and reports published since 1960, with emphasis on materials published since 1965. The bibliography is divided into three parts. Part one contains citations relating to issues, problems, and future uses of educational technology in general. Part two contains references to the various uses of a variety of specific media. Part three cites alternative methods to the organization of instruction.



# NEW TECHNOLOGY IN EDUCATION

SELECTED REFERENCES

PREPARED FOR THE

SUBCOMMITTEE ON SCIENCE, RESEARCH, AND DEVELOPMENT

OF THE

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## LETTER OF TRANSMITTAL

House of Representatives, Committee on Science and Astronautics, Washington, D.C., September 4, 1971.

Hon. George P. Miller, Chairman, Committee on Science and Astronautics, House of Representatives, Washington, D.C.

Dear Mr. Chairman: I am transmitting herewith a bibliography prepared for the Subcommittee by the Congressional Research Service entitled "New Technology in Education; Selected References." This bibliography is designed to provide ready reference for all Congressional committees which must deal with the impacts of technolog upon the American educational system. I commend this report to you and to the Congress.

Sincerely yours,

John W. Davis,
Chairman, Subcommittee on Science,
Research, and Development.

### LETTER OF SUBMITTAL

THE LIBRARY OF CONGRESS, CONGRESSIONAL RESEARCH SERVICE, Washington, D.C., August 6, 1971.

Hon. John W. Davis, Chairman, Subcommittee on Science, Research, and Development, Science and Astronautics Committee, U.S. House of Representatives, Washington, D.C.

Dear Representative Davis: In response to your request for references on the use of new technology in education, we are transmitting a bibliography entitled "New Technology in Education; Selected References."

The bibliography is in three parts. Part I includes citations relating to issues, problems and future uses of educational technology in general. Part II contains references to the various uses of a variety of specific media. Part III cites alternative methods to the organization of instruction.

The selection of items included in he bibliography was based on "instructional technology" as defined in the report of the Commission on Instructional Technology, To Improve Learning. Instructional technology in this sense is not confined to the use of specific media, but also includes systematic approaches to the use of human and non-human resources to bring about more effective instruction.

We hope that these citations will serve as a useful reference tool for Members of Congress and for all those who are interested in the present and potential uses of technology in education

ent and potential uses of technology in education.

The bibliography was compiled by Lilla M. Pearce and Helen A.

Miller, education analysts on the staff of the Education and Public Welfare Division of the Congressional Research Service.

Yours sincerely,

LESTER S. JAYSON,

Director.

(V)

### INTRODUCTION

"New Technology in Education; Selected References" includes books, articles monographs and reports published since 1960, with

emphasis on materials published since 1965.

In addition to our own resources, Research in Education, the index to documents collected by the Educational Resources Information Center (ERIC) of the Office of Education, has been searched. Documents cited from this source are followed by a document number in brackets, i.e. [ED 900 000]. Additional information on these documents may be obtained by consulting the appropriate entry in Research

broadest sense of the term.

The selection of items for inclusion in the bibliography was based on the definitions of "instructional technology" contained in the report of the Commission on Instructional Technology. The Commission's report, To Improve Learning (1970), defines instructional technology in two ways: First, as "the media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook, and blackboard;" and second, as "a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and nonhuman resources to bring about more effective instruction." In general, items corresponding to the former definition may be found in Part II, Uses of Specific Media. Parts I and III contain citations largely relating to the second and broader definition.

Part I also contains entries dealing with the relationship of media to certain groups and areas in education such as teachers or educational research. Headings, such as "Teachers and technology," however, include only general references to the subject. An article on the specific effect of programmed instruction on the teacher would be found under "Computers and programmed instruction" in Part II. In other words, Part I deals primarily with the effect of media in general, while Part II focuses on the uses of specific media in a variety of contexts relating to education. Part III is concerned with alternatives to traditional methods of organization for instruction. While the use of nonhuman resources is secondary to much of the material cited in Part III, new organizational designs for schooling have been included as they may be considered an integral part of educational technology in the

# CONTENTS

ntroductio	on
T Fance	tional Technology—Issues, Problems and future Uses
1. Educa	General discussions.
72	Standards for school media
Č.	Higher education and technology (including open university
C.	concept)
D.	
E.	Technology and the handicapped child
F.	Vocational education, guidance and counseling, and technology
G.	Teachers and technology
	Cost of educational technology
ī.	Facilities and technology (including learning centers, language laboratories, educational parks, a dn open-planschools)
J.	Business and educational technology
K.	Research in educational technology (including instructional objectives)
L.	the state of the s
	Accountability, performance contracting, and education
272.	vouchers
T. Uses o	f Specific Media
A.	Audio-visual instruction, equipment, and materials (including uses of multi-media)
ъ	Films and film-making in education
č.	Television and radio (including educational uses of commer cial and public television as well as instructional television cable television, and uses of satellites)
D.	Computers and programmed instruction (including computer
	assisted instruction and uses of data processing in educa
E.	
F.	
Ġ.	Games and simulation
	Drugs and learning
	zing for Instruction
	Consortiums in education and technology
B.	
	Individualized instruction
Ď.	Independent study
E.	Non-graded schools
F.	Flexible scheduling
<u> </u>	Free schools, schools without walls
	Extended school year

(IX)

#### NEW TECHNOLOGY IN EDUCATION

#### Selected References

### I. EDUCATIONAL TECHNOLOGY—ISSUES, PROBLEMS AND FUTURE USES

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134

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